

p. 250

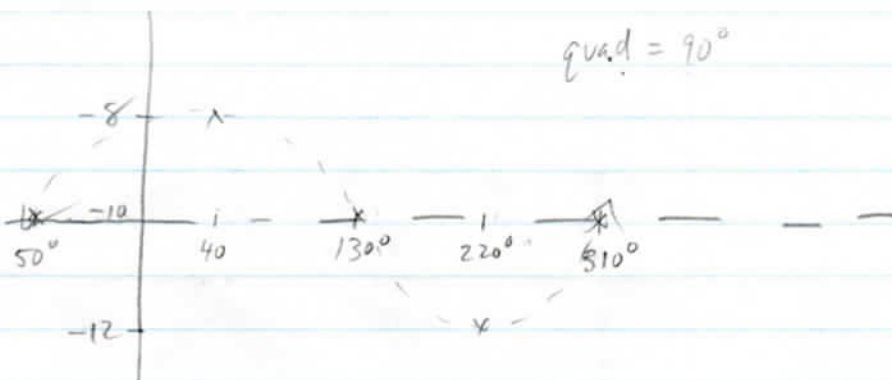
1. d.  $y = 2 \sin(x + 50^\circ) - 10$

$a = 2$  amp = 2

$b = 1$  per =  $360^\circ$

$c = 50^\circ$  shift left

$d = -10$  shift down



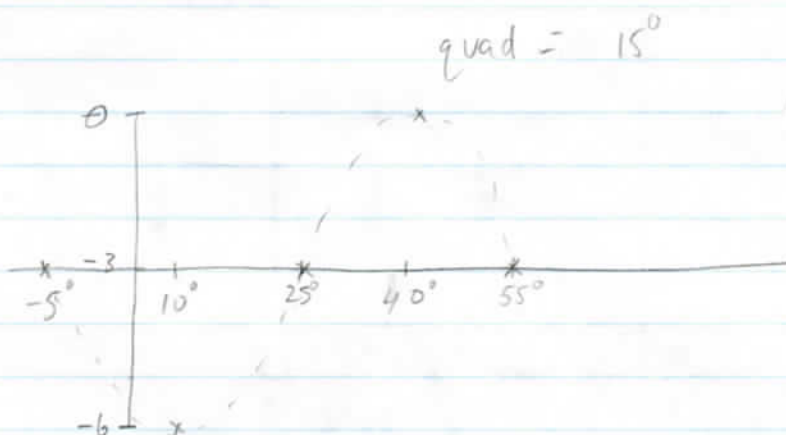
e.  $y = -3 \sin(6x + 30^\circ) - 3$   
 $y = -3 \sin 6(x + 5^\circ) - 3$

$a = 3$ , reflection

$b = 6$  per =  $\frac{360}{6} = 60^\circ$

$c = 5^\circ$  shift left

$d = -3$  shift down



f.  $y = 3 \sin \frac{1}{2} \left( x - \frac{\pi}{4} \right) - 10$

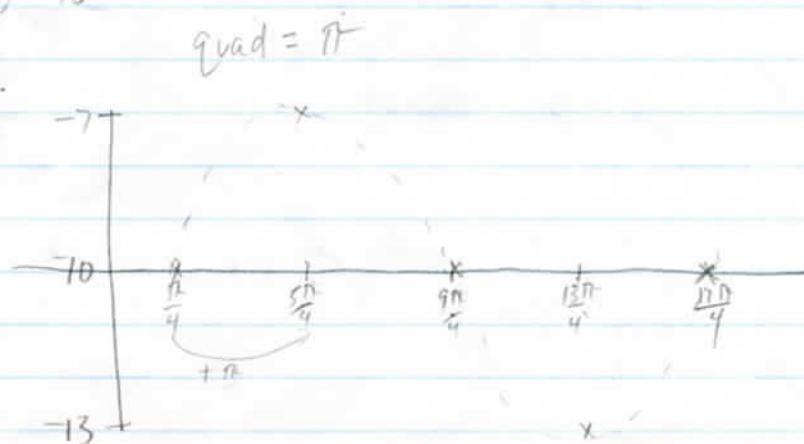
$a = 3$

$b = \frac{1}{2}$  per =  $\frac{2\pi}{\frac{1}{2}} = 4\pi$

$c = \pi/4$  right

$d = 10$  down

add in circle



$\frac{4\pi + \pi}{4} = \frac{5\pi}{4}$